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#### ABSTRACT

Given the high importance to this Nation's future of strengthening the quality of instructior, and access to that instruction, in the critical subjects supported by Title II of the Education for Economic Security Act, every effort should be made to widely and effectively share program successes. This Special Program of Exemplary Projects is one effort to accomplish that goal. The 23 projects presented at the National Title II Conference were selected from nearly 100 nominated by the states, each state nominating one project supported by the State Education Agency for Elementary and Secondary Education and one project funded by the State Agency for Higher Education. All nominated projects were considered to be equally outstanding and those selected to participate in the Washington meeting were chosen primarily on the basis of geographic and subject matter representation. A catalog of the nominated projects is included in this document. (CW)

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## THE EDUCATION FOR ECONOMIC SECURITY ACT

U.S. Department of Education

Omni Shoreham Hotel Washington, D.C

December 10, 1987

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# EXEMPLARY PROGRAM PRESENTATIONS

TITLE II OF THE EDUCATION FOR ECONOMIC SECURITY ACT

U.S. DEPARTMENT OF EDUCATION

COORDINATED BY:
Carolyn S. Lee
Mathematics/Science Program
U.S. Department of Education
Washington, D.C. 20202

December 10, 1987



#### INTRODUCTION

Given the high importance to this Nation's future of strengthening the quality of instruction, and access to that instruction, in the critical subjects supported by Title II of the Education for Economic Security Act, it is essential that every effort be made to widely and effectively share program successes. This Special Program of Exemplary Projects is one effort to accomplish that goal.

The 23 excellent projects presenting at the National Title II Conference were selected from nearly one-hundred nominated by the States - each State nominating one project supported by the State Education Agency for Elementary and Secondary Education and one project funded by the State Agency for Higher Education. All nominated projects were considered to be equally outstanding and those selected to participate in the Washington meeting (the National Steering Committee recommended that approximately 20 be selected) were chosen primarily on the basis of geographic (two per Education Department I gion) and subject matter representation (to achieve a balance among Title II subjects and grade levels). All of the nominated projects will be included in a monograph that will be distributed nation-wide.

In the program scheduling, every effort was made to pair projects with similar content characteristics. When participating in the sessions, we encourage States to split up their teams so that at least eight exemplary programs can be interacted with during the time period.

We want to sincerely thank all of the State Title II officials and State and local project staff for their extraordinary contributions in helping to put this terrific set of programs together. As has become the tradition in Title II, a lot of busy and important people graciously and effectively extended a great deal of extra effort in helping us to identify and widely share the accomplishments of these excellent projects.

If you have any questions about the Title II exemplary projects or have any recommendations to make regarding how they can best be articulated and disseminated please contact Carolyn Lee at (202) 732-4340.

Carolyn S. Lee

Allen Schmieder



<u>KEY TO PROJECT SUMMARIES</u> - Information for each project is provided for the following categories and in the following order:

Nominating State - (State Education Agency (SEA) or State Agency for Higher Education (SAHE) nominated and funded/ and specific category of Title II Funds) - Title of Project - Subject/s covered - Grade levels included - Special focuses (if any) - Target Group/s, Project Goal/s, Presenter/s, Moderator/s (usually State Nominator/s)



ALL PROGRAMS WILL BE PRESENTED TWICE - 10:00 a.m. - 11:00 a.m. and again from 11:15 a.m. to 12:00 P.M.

### SCHEDULE OF PROGRAMS

PROGRAMS	SUBJECT/S/GRADE LEVEL/S	ROOM
PROGRAM I	Science-K-12 Science-K-12	CALVERT
PROGRAM II	Science-9-12 Science-11-12	COUNCIL
PROGRAM III	Math-K-12 Math-K-12	GOVERNORS BOARD
PROGRAM IV	Math-8-9 Math-K-6	EMPIRE
PROGRAM V	Math/Computer Science-Jr. High Science-9-12	CAUCUS
PROGRAM VI	Math/Science/Computer Science K-12 Science-4-6	EMBASSY
PROGRAM VII	Math/Science-6-8 Math/Science-K-12	CAPITOL
PROGRAM VIII	Math/Science-K-12 . Math/Science-K-12	ROOM 663 .
PROGRAM IX	Math/Science-K-6 Math/Science-K-6	ROOM 763
PROGRAM X	Math/Science-K-12 Math/Science-9-12	FORUM
PROGRAM XI	Norwegian-K-6 Spanish-7-12	CHAIRMANS BOARD
PROGRAM XII	Math/Science-7-12	COMMITTEE



PROGRAM I CALVERT

CONNECTICUT - (SEA-SAHE/COOPERATIVE) - PROJECT ROBOTACTS - Science - K-12 - Partnership/Ed-Business - Target Groups: gifted and talented, districts serving historically underserved student populations. Goal: to provide students, teachers, and the community at large, with creative and exciting learning experiences in science and technology. (This program received original funding from the Title II Secretary's Discretionary Fund).

CONTACT : Mr. Aaron Rutherford

PHONE NUMBER: (203) 566-3910

PRESENTERS: Ken Alkire

Karen Askins Jane Holdsworth Jacob Mendelssohm Creig Peterson

MODERATOk: Aaron Rutherford

CALIFORNIA - (SEA-EL/SEC/SAHE-COMPETITIVE/COOPERATIVE) - SCIENCE INSERVICE FOR RURAL CALIFORNIA - Science K-12 - Target Group: science teachers in rural California typically not serviced by university or National Science Foundation staff development programs. Goal: to disseminate currently available science education projects to a small but potent cadre of science teachers, mentor teachers, and department chairpersons. Designed to bring quality science education programs developed by the Lawrence Hall of Science to rural northern California science teachers.

CONTACT : Mr. Thomas P. Sachse

PHONE NUMBER: (916) 324-7187

PRESENTERS: Linda Delucci

Larry Malone

MODERATOR: Thomas P. Sachse

PROGRAM II COUNCIL

MASSACHUSETTS - (SAHE-COMPETITIVE) - HARBOR EXPLORATIONS - Science - 9-12 - Partnership/Ed-Business/Consortiums - Target Group: secondary science teachers. Two of the five goals are: 1) to provide an institutional base and solid academic connection for experienced and new science teachers who want to improve their knowledge of science content, teaching skills, and engage in field research opportunities by using the Boston Marine environment as a laboratory setting; and 2) to provide motivating "hands-on" on-water learning experiences for students that would become part of the learning activities of a full Boston Harbor classroom curriculum.

CONTACT : Dr. George Lowery/Ms. Elizabeth Fideler

PHONE NUMBER: (617) 727-7785

PRESENTERS: John Crowley

Betty J. Diener Jean MacCormack Howard M. Weiss

MODERATOR: George Lowery

NEBRASKA - (SEA-SAHE/COMPETITIVE) - HIGH SCHOOL PHYSICS

DEMONSTRATION/LABORATORY INSTITUTE - Science - 11-12 - Target

Groups: disadvantaged, the gifted, vocational education. Goals: participants will observe numerous demonstrations that they can use to teach physics to their students; they will learn some basic electronics and construct some electronic devices to help them better teach physics; they will meet and work with physics teachers from three different high schools who have been selected as exemplary teachers.

CONTACT : Mr. James Woodland

PHONE NUMBER: (402) 471-4329

PRESENTER: James Woodland

MODERATOR: Doris M. Crudup



PROGRAM III

#### GOVERNORS BOARD ROOM

ALASKA - (SEA -DEMONSTRATION-EXEMPLARY) - THE ALASKA MATH CONSORTIUM - Mathematics - K-12 - Target Group: all teachers. Goals: to strengthen the math skills of all Alaska students through teacher training and exchange of successful classroom practices. Teachers from member districts participate in in-depth training which prepares them to lead efforts to enrich math programs in their school district.

CONTACT: Ms. Betty Reynolds PHONE NUMBER: (907) 465-2824

PRESENTER: Peggy Cowan

MODERATOR: Betty Reynoldson

INDIANA - (SAHE-COMPETITIVE) - IMPLEMENTATION OF MATHEMATICS
ACHIEVEMENT THROUGH PROBLEM SOLVING - Mathematics - K-12 Target Group: entire school corporations; teachers of students
taking "non-academic curricula;" with a priority to disadvantaged
students. Goals: to train mathematics teachers in the use of
the MAPS curriculum (Math Achievement in Problem Solving) for
students in non-academic curriculums; to change attitudes toward
mathematics teaching within entire school corporations.

CONTACT : Mr. John R. Hammond, III

PHONE NUMBER: (317) 232-4583

PRESENTER: Grayson Wheatley

MODERATOR: Karen Rasmussen



PROGRAM IV EMPIRE

NEW JERSEY - (SEA-EL/SEC) - THE NEW JERSEY ALGEBRA PROJECT - Mathematics - 8-9 - Partnership - Target Group: diversified. Goal: to enable a much broader spectrum of students to be successful in learning algebra and to be able to use it in doing quantitative reasoning.

CONTACT: Dr. Joel Bloom PHONE NUMBER: (609) 292-4461

PRESENTERS: Laurie Fitchett

Charles Pine

MODERATOR : Ron Lesher

TEXAS - (SAHE-COOPERATIVE/COMPETITIVE) - TRAINING OF
ELEMENTARY SCHOOL TEACHERS IN MATHEMATICAL THINKING AND
PROBLEM SOLVING - Mathematics - K-6 - Underserved/Underrepresented; Partnership (Ed-Business and LEA-IHES) - Target
Groups: disadvantaged, gifted, vocational education, disadvantaged
gifted. Goal: to train elementary school teachers how to
establish classroom learning environments that stimulate high
level thinking skills in mathematics.

CONTACT: Ms. Nan Broussard PHONE NUMBER: (512) 462-6463

PRESENTERS: Patricia Hess

Kathleen Martin

MODERATOR : Nan Broussard



PROGRAM V CAUCUS

UTAH - (SEA-DEMONSTRATION-EXEMPLARY) - COMPUTERS IN THE MATHEMATICS CLASSROOM - Mathematics/Computer Science - Junior High School - Partnership/Inservice and Retraining - Target Group: mathematics teachers. Goals: to develop and implement a computer mathematics training program for teachers; to create an exemplary model of how higher education can effectively interface with schools and teachers; to present students with state of the art of educational experiences.

CONTACT : Dr. Mark Spencer/Mr. R. LaMar Allred

PHONE NUMBERS: (801) 538-5247 (801) 533-5965

PRESENTER: Patricia Henry

MODERATOR: Mark Spencer

MARYLAND - (SAHE-COMPETITIVE) - COMPUTERS TO ENHANCE SCIENCE EDUCATION - Science - 9-12 - Computer Learning/Partnership - Target Groups: underserved/underrepresented. Goal: to use computers to enhance science instruction; intergrate computer education into the science curriculum so that students will see the computer as a powerful tool which will enable them to probe their environment and to process information.

CONTACT : Dr. George J. Funaro/Mr. Javier Miyares

PHONE NUMBER: (301) 974-2971

PRESENTER: Jo Ellen Roseman

MODERATOR: Javier Miyares



PROGRAM VI EMBASSY

DISTRICT OF COLUMBIA - SEA-DEMONSTRATION-EXEMPLARY) - MATHEMATICS-SCIENCE RESOURCE CENTER - Mathematics/
Science/Computer Science - Pre-Kin regarten through grade twelve - Target Group: teachers teaching mathematics, science, and computer learning out of field; certified mathematics and science teachers from public, private, and parochial schools. Goal: to provide materials, equipment, and personnel to support the training and retraining of mathematics, science, and computer science teachers, thereby improving mathematics and science education in the District of Columbia.

CONTACT: Mr. Tom Garrett PHONE NUMBER: (202) 724-4235

PRESENTERS: Doris Deboe

Gloria White

MODERATOR : Tom Garrett

ARKANSAS - (SEA-LEAS/CONSORTIUM) - SCIENCE NSERVICE FOR ELEMENTARY TEACHERS - Science - 4-6 - Targe Group: all teachers grades 4 to 6. Goals: to provide science content inservice training for teachers of grades four through six; to model discovery and inquiry methods of teaching science for elementary teachers; to serve as a resource to teachers as they plan and prepare to introduce activities in the area of science.

CONTACT : Dr. Charles D. Watson

PHONE NUMBER: (501) 371-2941

PRESENTERS: Tim Daniels

Marshall Danieis
Joe Stephens

MODERATOR : Charles D. Watson



PROGRAM VII CAPITOL

ARIZONA - (SEA-DEMONSTRATION-EXEMPLARY) - ARIZONA TEACHERS'
ACADEMY - Mathematics/Science - 6-8 - Target Group: rural and small school science and mathematics teachers. Goals: to form networks of colleagues who will support change and innovation througout the school year; gain new knowledge and apply the knowledge within mathematics and science classroom contexts; assess current philosophy, methods, and instructional programs; design professional growth plans; share exemplary programs.

CONTACT: Mr. David Hardway PHONE NUMBER: (602) 255-2147

PRESENTER: Larry McBiles

MODERATOR: David Hardway

LOUISIANA - (SEA-DEMONSTRATION-EXEMPLARY) - LOUISIANA'S EDUCATIONAL SPACE SCIENCE RESOURCE CENTER/"NASA AND LOUISIANA PREPARING FOR OUR FUTURE" - Mathematics/Science - K-12 - Partnership: Ed-Business/LEAS-IHES. Target Groups: underserved/underrepresented. Gcals: re-energize Nation's commitment to educational excellence; increase scientific literacy among citizens; equip teachers with new tools and strategies to produce more creative, effective science and math instruction.

CONTACT : Dr. Dan K. Lewis/Ms. Doris P. Johnson

PHONE NUMBER: (504) 342-3375

PRESENTER: Deborah W. Harris

MODERATOR: Doris P. Johnson

PROGRAM VIII ROOM 663

MICHIGAN - (SEA-LEA) - MATHEMATICS/SCIENCE TITLE II STAFF

DEVELOPMENT GRANT - Mathematics/Science - K-12 - Partnership 
Target Groups: math/science teachers, reassigned teachers.

Goals: to improve the instructional process and content in

mathematics and science; to form a partnership with industry

and prepare for the 21st Century; to increase students' awareness

(especially females) of the need for mathematics and science.

CONTACT : Ms. Nancy C. Mincemoyer

PHONE NUMBER: (517) 373-3279

PRESENTER: Barbara Markle

MODERATOR: Nancy C. Mincemoyer

WYOMING - (SAHE-COMPETITIVE/SEA-LEA) - PROJECT RENEW - A
SYSTEM FOR EDUCATIONAL RENEWAL OF WYOMING TEACHERS IN SCIENCE
AND MATHEMATICS - Mathematics/Science - K-12 - Partnership/
LEA-IHES - Target Groups: teachers of mathematics and
science. Goal: to establish a contining schools-university
partnership that will evolve into an effective vehicle for
the improvement of science and mathematics education in Wyoming
and the region.

CONTACT : Mr. Alan G. Wheeler

PHONE NUMBER: (307) 777-6808

PRESENTER: Vince Sindt

MODERATOR: Pete Ellsworth



PROGRAM IX ROOM 763

MISSISSIPPI - (SEA-EL/SEC/SAHE-COOPERATIVE) - MATHEMATICS AND SCIENCE STAFF DEVELOPMENT K-6 - Mathematics/Science - K-6 - Partnerships/LEAS-IHES -Target Group: underserved/under-presented, LEAs with low student achievement as measured by ACT scores. Goal: to enhance the instructional capabilities of K-6 teachers related to the basic and integrated science processes, critical thinking, computorial logic, proportional reasoning, and basic manipulative and mathematical skills.

CONTACT: Dr. Rita Norton/Ms. Margaret Sentif PHONE NUMBERS: (601) 982-6611 (601) 359-3498

PRESENTERS: Bobby Irby
Malcolm McEwen
Colleen Noble
Garth Runion

MODERATOR : Margaret Sentif

MISSOURI - (SAHE-COMPETITIVE) - THE KSAM PROJECT:
IMPROVING ELEMENTARY SCIENCE AND MATHEMATICS INSTRUCTION Mathematics/Science - K-6 - Underserved/Underrepresented;
Partnerships - LEAS-IHES; Cooperative - SEAS-SAHE - Target
Group: elementary teachers in rural school districts.
Goals: to encourage teachers to incorporate more hands-on
science and mathematics instruction in their classes and to
increase the amount of time spent in the elementary classroom
on science and mathematics; to increase teacher confidence in
teaching mathematics and science and to provide teachers with
information regarding available methods and materials for
incorporating science and math activities into the classroom.

CONTACT : Dr. Cynthia Phillips

PHONE NUMBER: (314) 751-2361

PRESENTERS: Ernest L. Kern

Edward C. Stoever, Jr.

MODERATOR : Cynthia Phillips

PROGRAM X FORUM

NORTH CAROLINA - (SAHE-COMPETITIVE) - MODIFIED CERTIFICA-TION PROGRAM TO STUDY RURAL AREAS WITH QUALIFIED MATHEMATICS AND SCIENCE TEACHERS - Mathematics/Science - K-12 - Underserved - Target Group: college graduates who are currently working in industry or the military service, or who are attending graduate school. Goal: to provide an alternative certification method to supply rural areas with qualified middle grade and high school mathematics and science teachers.

CONTACT : Dr. Vinetta Jones/Mr. Tom Rudin

PHONE NUMBER: (919) 966-3256

PRESENTERS: Charles Coble

Katherine Hodgin Annabell W. Pearson

MODERATOR: Vinetta Jones

NEW YORK - (SAHE-COMPETITIVE) - SUNY PURCHASE/WESTCHESTER SCHOOL PARTNERSHIP: MAKING THE CONNECTIONS FOR BETTER EDUCATION - Mathematics/Science (chemistry and physics) - Secondary School - Target Group: high school teachers of chemistry, mathematics and physics. Goal: to improve mathematics and science curricula and teaching in high schools through a network of dedicated, well-trained teachers.

CONTACT : Mr. Claudio R. Prieto/Ms. Rebecca Kinnard

PHONE NUMBERS: (518) 474-1311 (518) 474-5705

PRESENTERS: H. Murray Blueglass
Theodore L. Gross
Carlo Parravano
Sidney Trubowitz

MODERATOR : Fran Holland

CHAIRMANS BOARD ROOM

#### PROGRAM XI

MINNESOTA - (SEA-DEMONSTRATION-EXEMPLARY) - LEARNING TO INTEGRATE NORWEGIAN, THE CLASSROOM AND THE COMMUNITY (LINC)

PROJECT - Foreign Languages - K-6 - Partnership/LEA/IHES - Target Group: all students in grades K-6, with a special activity addressing the needs of gifted and talented students. Goals: to enable students in grades K-6 and their teachers to communicate verbally and nonverbally in the Norwegian language in settings that correspond to learning experiences in the classroom context; to identify and interpret elements of Norwegian culture found in the immediate geographic area; and to apply perspectives of Norwegian culture to topics taught throughout the daily curriculum.

CONTACT : Ms. Nancy B. Walters

PHONE NUMBER: (612) 296-2704

PRESENTER: Janet Pladson

MODERATOR: Nancy B. Walters

TEXAS - (SEA-DEMONSTRATION-EXEMPLARY) - FOREIGN LANGUAGE

ARTS PROJECT FOR HISPANIC SPEAKERS - Spanish - 7-12 - Target

Group: Hispanic students. Goals: to explore the history of teaching Spanish to native speakers of Spanish in the United States; to review instructional materials; to acquire instructional strategies to improve the delivery of Spanish instruction and to develop curriculum publications.

CONTACT : Dr. Gilbert S. Garcia/Ms. Rosalind Eathorne

PHONE NUMBER: (512) 463-9661

PRESENTERS: Rosalind Eathorne Gilbert S. Garcia

MODERATOR: Gilbert S. Garcia



PROGRAM XII

#### COMMITTEE ROOM

ALABAMA - (SEA-SAHE/COOPERATIVE) - ALABAMA TEACHERS' SPACE
ORIENTATION COURSE - Mathematics/Science - 7-12 - Partnership:
Ed-Business/Government Agencies - Target Group: teachers of
gifted students. Goals: to introduce the teachers to a variety
of space related subjects and techniques which may be used in
the classroom; to present current research and technological
development in a hands-on experience with the Space Program; to
develop a number of experiments which can be used in the
classroom; to motivate teachers to stimulate pupils in the
areas of mathematics and science; to motivate teachers to not
lower their standards but increase their effort in these areas.

CONTACT: Dr. Eloise T. Kirk PHONE NUMBER: (205) 261-5145

PRESENTERS: William E. Berryman

John Funk William Lucas

MODERATOR : Eloise T. Kirk